



# The Vision for 2025 and Key Next Steps

## National Action Plan for Energy Efficiency

[www.epa.gov/  
eeactionplan](http://www.epa.gov/eeactionplan)

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# Today's Presentation

- Purpose
- Development of the Vision
- Vision for 2025 Overview
  - Action-orientated Implementation Goals
  - A Look at the Energy System in 2025
  - Emerging issues and related policies
  - Framework for the future
- Implementing the Goals
  - Measuring progress
- Next Steps



# Purpose of the Vision for 2025

- Outline a long-term vision of where the Action Plan can take our electric and natural gas delivery systems
- Outline what needs to be achieved over three to five year periods to meet this long-term vision across regional, state and local efforts
- Provide a framework for and help prioritize key guidance materials and other tools to be developed under the Action Plan
- Provide a plan that can be updated as information changes



# Development of the Vision

- Challenge to Leadership Group at March 2007 Meeting
- Draft prepared by work group:
  - Glenn Cannon, Waverly Light and Power
  - Jorge Carrasco, Seattle City Light
  - Sheryl Carter, NRDC
  - Ollie Frazier, Duke Energy
  - Anne George, Connecticut DPU
  - Dian Grueneich, California PUC
  - Jeff Genzer and Michelle New, NASEO
  - Sandra Hochstetter, AR Electric Coop. Corp.
  - Chris James, formerly with the CT DEP
  - Mary Kenkel, Alliance One (Duke Energy)
  - Bill Prindle, ACEEE
  - Roland Risser, PG&E
  - Richard Robinson, NRECA
  - Gene Rodrigues, SoCal Edison
  - James Rogers, Duke Energy
  - Marsha Smith, NARUC and Idaho PUC
  - Jim Spiers, Tri-State G&T
  - Mike Winka, New Jersey BPU
  - Janet Streff, MN Dept. of Commerce
- Leadership Group review and conference calls
- Leveraged information from Regional Implementation Meetings



# Vision for 2025 Overview

- Long-term Aspirational Goal
  - To achieve all cost-effective energy efficiency by the year 2025
- 10 Implementation Goals
  - Framework for implementing Action Plan recommendations
  - Action needed over next 10-15 years for help lay policy foundation by 2025
- Initial approach to measure progress

## National Action Plan for Energy Efficiency Recommendations

1. Recognize energy efficiency as a high-priority energy resource.
2. Make a strong, long-term commitment to implement cost-effective energy efficiency as a resource.
3. Broadly communicate the benefits of and opportunities for energy efficiency.
4. Provide sufficient, timely and stable program funding to deliver energy efficiency where cost-effective.
5. Modify policies to align utility incentives with the delivery of cost-effective energy efficiency and modify ratemaking practices to promote energy efficiency investments.



# Vision for 2025 Overview (cont'd)

- Living document; open to new ideas; will be refined
- It is a plan – need to know where you want to go in order to get there
- It is a framework – long-term goal with ten important implementation goals
- Product of the stakeholders
- A challenge for new thinking
- Highlights need for new technology
- Offers strawman approach for measuring progress
- Not a mandate; respects state processes – not one size fits all



# Vision's 10 Implementation Goals

1. Establishing Cost-Effective Energy Efficiency as a High-Priority Resource
2. Developing Processes to Align Utilities Incentives Equally for Efficiency & Supply Resources
3. Establishing Cost-Effectiveness Tests
4. Establishing Evaluation, Measurement, and Verification Mechanisms
5. Establishing Effective Energy Efficiency Delivery Mechanisms
6. Developing State Policies to Ensure Robust Energy Efficiency Practices
7. Aligning Customer Pricing and Incentives to Encourage Investment in Energy Efficiency
8. Establishing State of the Art Billing Systems
9. Implementing State of the Art Efficiency Information Sharing and Delivery Systems
10. Implementing Advanced Technologies



# Achieving All Cost-Effective Energy Efficiency: Key Perspectives



- Efficient home envelope
- Efficient windows, lighting, appliances
- Efficient, properly sized/installed HVAC
- Low-standby energy use
- Verification of home energy efficiency
- Grid-connected controls and appliances
- Good information
- Whole-building design



- Energy-efficient equipment
- Low-standby energy
- Efficient lighting systems
- Properly sized, efficient HVAC
- Commissioning/recommissioning
- Routine assessment of performance
- Grid-connected controls/equipment
- Good information
- Whole-building design



- Pursue all cost-effective EE resources
- Universal efficiency services across all customer classes
- Enhanced use of clean DG
- Modernized grid supports greater data analysis, customer control, utility control of peak-driving equipment, self-healing capabilities



- Lower energy bills
- Environmental benefits
- Lower greenhouse gas emissions
- Enhanced reliability
- Low-income and elderly assistance
- New jobs/growing local services
- Increased fuel diversity



- Efficient equipment/motor systems
- Efficient lighting systems using good design, controls, daylighting, and efficient technology
- Processes tuned for efficiency
- Waste heat recovered and utilized
- Good information



# Evolving Technologies and Policies

- Evaluation, measurement and verification
- Demand response, advanced metering, and smart grid
- Regional resource planning
- Building energy efficiency expertise/workforce
- Integration of R&D, building codes, appliance standards, and market transformation efforts



# Related State, Regional, and National Policies

- Limit emissions of greenhouse gases
- Encourage the use of clean, efficient distributed generation
- Promote clean energy supply, such as renewable energy
- Promote load reductions at critical peak times through demand response
- Modernize and maintain the nation's electric transmission and distribution system, including smart grid and advanced meter infrastructure
- Maintain a sufficient reserve margin for reliable electricity supply



# Vision Provides Framework for Action Plan Resources

Goal	Type of Tool or Resource		Detailed Action Plan Tools and Resources
	Introduction to Issues in Action Plan Report	Detailed Guide/How to Material	
<b>Goal One:</b> Establishing Cost-Effective Energy Efficiency as a High Priority Resource	X	X	Guide to Resource Planning with EE Guide for Conducting EE Potential Studies Communications Kit
<b>Goal Two:</b> Developing Processes Which Align Utilities Incentives Equally for Efficiency and Supply Resources	X	X	Aligning Utility Incentives with Investment in EE
<b>Goal Three:</b> Establishing Cost Effective Tests	X		Guide to Resource Planning with EE Guide for Conducting EE Potential Studies
<b>Goal Four:</b> Establishing Evaluation, Measurement and Verification Mechanisms	X	X	Model EE Program Impact Evaluation Guide
<b>Goal Five:</b> Establishing Effective Energy Efficiency Delivery Mechanisms	X	X	Regional Implementation Meetings Resources Database



# Vision Provides Framework for Action Plan Resources (cont'd)

Goal	Type of Tool or Resource		Detailed Action Plan Tools and Resources
	Introduction to Issues in Action Plan Report	Detailed Guide/How to Material	
<b>Goal Six:</b> Developing State Policies to Ensure Robust Energy Efficiency Practices		X	Building Codes for EE Fact Sheet
<b>Goal Seven:</b> Aligning Customer Pricing and Incentives to Encourage Investment in Energy Efficiency	X		
<b>Goal Eight:</b> Establishing State of the Art Billing Systems		X	Sector Collaborative on EE; Overview of Utility Data Availability and Proposed Best Practices to Facilitate Energy Benchmarking
<b>Goal Nine:</b> Implementing State of the Art Efficiency Information Sharing and Delivery Systems		X	Paper on Coordination of Demand Response and Energy Efficiency (under development)
<b>Goal Ten:</b> Implementing Advanced Technologies			



# Implementing the Vision Goals

- Steps in place by 2015/2020 to achieve all cost-effective energy efficiency by 2025
- Action encouraged by various parties
  - Utilities
  - Utility regulators / ratemaking bodies
  - Applicable state agencies
  - Stakeholders
- Measuring progress is vital to success



# Measuring Progress towards the Vision for 2025

- Objectively focus on measurable outcomes
- Achieve consistently across the states, recognizing that states can have important differences
- Show momentum with policy and program changes
- Quantify key metrics
  - Energy to be saved through goals (kWh, KW, therms)
  - Energy saved (kWh, KW, therms)
  - Carbon reductions
  - Dollars invested
  - Cost-effectiveness of delivered programs



# Initial Strawman Approach for Measuring Progress

- Proposed policy and program steps
  - 5 steps: no approach for measuring progress – to be developed in short term
  - 3 steps: no approach for measuring progress – to be developed based on future resource planning, technology and infrastructure development
- Leveraged existing information
  - Status of 40 options collected at state level for Regional Implementation Meetings
  - Gaps filled by referencing existing sources
  - Information sent to state organizations for comment
- To be refined by Leadership Group



# Key Questions to Measuring Progress

- Which of the measurement approaches are in need of major refinement?
- What changes would you like to see made to the initial approach?
- Do some of the measurement approaches seem difficult to use objectively and consistently, recognizing that some states have different regulatory structures?
- Do implementation options that vary by market or other structure require separate measurement approaches (such as goal 2)?
- What else could be done to ensure data consistency across the goals and states?



# Summary of Initial Comments on Measuring Progress Questions

- Comments from Vision review process and additional call for comments from Leadership Group
  - Strive for consistency across states
  - Creating implementation options for regulated and restructured markets for certain goals may be useful
  - Examine steps under goal 1
  - Acknowledge differences in measuring savings (regulatory structures and implementation vehicles)
  - Explore reflecting activities by organizations that may not be captured at the state-level
  - Appropriateness of state appliance standards goal



# Leadership Group Identified 17 Initial Strawman Steps to Refine

- 1: Process in place, such as a state and/or regional collaborative, to pursue EE as a high-priority resource
- 2: Policy established to recognize EE as a high-priority resource
- 3: Potential identified for cost-effective, attainable EE over the long term
- 4: EE savings goals established consistent with cost-effective potential
- 5: EE savings goals integrated into state energy resource plan, with provisions for regular updates
- 7: Utility throughput incentive is addressed and disincentives are removed
- 10: Cost-effectiveness tests adopted which reflect the long-term resource value of EE
- 11: Robust, transparent EM&V procedures established
- 13: Stable (multi-year) and sufficient funding in place consistent with EE goals
- 14: Programs established to deliver energy efficiency to key customer classes and meet EE goals
- 16: EE program administrator(s) engaged in developing and sharing program best practices at the regional and/or national level
- 17: State policies require routine review and updating of building codes.
- 18: Building codes effectively enforced
- 19: State appliance standards in place
- 20: Strong state and local government lead-by-example programs in place
- 22: Mechanisms in place to reduce customer disincentives for EE (e.g., including financing mechanisms).
- 27: Policies in place to remove barriers to clean, efficient distributed generation.



# Method to Measure Progress Needed for 8 Initial Strawman Steps

## Steps with method to be developed in short-term:

- 8: Utility incentives for EE savings reviewed and established as necessary
- 9: Timely cost recovery in place
- 15: Strong public education programs in EE in place
- 18: Building codes effectively enforced
- 26: Programs established to use trained and certified professionals as part of EE program delivery

## Steps with method to be developed based on future progress:

- 6: EE savings goals integrated into regional energy resource plan
- 23: Consistent information to customers on energy use, costs of energy use, and options for reducing costs
- 28: Timelines developed for the integration of advanced technologies



# Proposed Process and Timeline to Refine Measuring Progress

- Leadership Group members volunteer to form Work Group
  - Volunteers by end of January
- Work Group to further discuss and draft measuring progress approaches for steps identified by the Leadership Group and currently outstanding short-term in Vision document
  - Approaches sent to Leadership Group for review/comment by end of February. Comments due mid-March.
- Work Group to discuss and draft approach for who will collect data
  - Approach sent to Leadership Group for review/comment by end of April. Comments due mid-May
- Data collection on new elements
  - Completed in Summer 2008 and incorporated into Vision.

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# Other Next Steps?

